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| 10/505,431 | 08/24/2004 | Katsutoshi Moriyama | SON-2624 | 1635 |
| 23353 | 7590 | 11/01/2007 | | |
| RADER FISHMAN & GRAUER PLLC | | | EXAMINER | |
| LION BUILDING | | | ELAND, SHAWN | |
| 1233 20TH STREET N.W., SUITE 501 | | | | |
| WASHINGTON, DC 20036 | | | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/505,431

Applicant(s)

MORIYAMA ET AL.

Examiner

Shawn Eland

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,8 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,8,14-18 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2188

DETAILED ACTION

This Office action is in response to the Applicant's response filed on 08/09/07.

Applicant's previous response, dated April 20, 2007 states "that the IDS included a typo, inadvertently reciting JPO action **2002-079529**, instead of JPO action **2002-079529**." Applicant's response in this regard does not make sense and the Examiner assumes that this is a typo, and perhaps said IDS should have recited JPO action number 2002-079528. The Examiner still respectfully requests that Applicant state which JPO action number should have been on said IDS as there is no mention of this on the most current response, dated 08/09/07.

Status of Claims

Claims 1, 5, 7 – 8, & 14 – 22 are pending in the Application.

Claims 3, & 9 – 13 are cancelled.

Claims 14 – 22 are new.

Claims 1, 5, 7 – 8, 14 – 18, & 20 – 22 are rejected.

Claim 19 is objected to.

Response to Arguments

Applicant's arguments filed 08/09/07 have been fully considered but they are not persuasive.

Art Unit: 2188

Applicant argues against the inherency of the control signal generating section also stating there is no supporting evidence for it. First, the Examiner has interpreted the claim language to define the control signal generating section to merely be the portion of the invention generating the readout control signal and write control signal. So the Examiner sees that the key to the inherency argument lies with control signals to read out existing data or write out the new data. The Examiner sees these signals as inherent because the system must know when to read the control image store 14 and when to write to it. There must be at least one signal that tells the system to either read or write said data and this happens once the user starts the drawing process. If nothing is being drawn, then no comparison between new and existing data occurs. This at least one signal, once enabled, would be a readout control signal if it tells the system to read out existing data and would be a write control signal if it tells the system to write out the new data. There is nothing in the claim language that specifies where these signals are connected. They are only defined by what they do.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 7 – 8, & 14 – 18 are rejected under 35 U.S.C. 102(b) as being anticipated by *Searby* (US 5,412,402).

In regard to claim 1, Searby teaches a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element (*see element 13*), and configuring so that, in said comparison section, in a case where said exiting data and said new data are identical with each other, the writing to said storage element is not performed, and in a case where said existing data and said new data are not identical with each other, said new data is written to said storage element (*see column 7, lines 34 – 38;*); and characterized by provided with a control signal generating section for generating a readout control signal for performing readout control of said existing data and a write control signal for performing write control of said new data (*the control signal generating section, while not shown, must exist in order for the circuit to know when to read control image data K and brush coefficient K_B*), and by configuring so that said existing data and said new data are compared with each other in said comparison section in accordance with said write control signal from said control signal generating section (*see column 8, lines 13 – 17*).

Regarding claim 8, Searby teaches wherein said readout control signal and said write control signal are derived from a write signal input to said control signal generating section (*see element 7*).

In regard to claim 5, Searby teaches a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element (*see element 13*), and configuring so that, in said comparison section, in a case where said existing data and said new data are identical with each other, the writing to said storage element is not performed, and in a case where said existing data

Art Unit: 2188

and said new data are not identical with each other, the writing of said new data to said storage element is performed (*see column 7, lines 34 – 38*); characterized by providing with a control signal generating section (*the control signal generating section, while not shown, must exist in order for the circuit to know when to read control image data K and brush coefficient K_B*) for generating a readout control signal for performing readout control of said existing data (*the system has to know when to read out the existing data so therefore it is inherent*) and a write control signal for performing write control of said new data, and by configuring so that said existing data and said new data are compared with each other in said comparison section in accordance with a control signal from said control signal generating section (*see column 7, lines 34 – 38*).

Regarding claim 7, Searby teaches the comparison section is provided with a new data retention section for temporarily retaining the new data (*see element 14*); an existing data retention section for temporarily retaining the existing data (*see element 14*); and a write enable signal generating section for comparing the new data retained in the new data retention section and the existing data retained in the existing data retention section with each other to control an output of the write enable signal (*see column 8, lines 23 – 26*), the new data is temporarily retained in the new data retention section while the existing data is temporarily retained in the existing data retention section in accordance with the readout control signal output from the control signal generating section, and the new data retained in the new data retention section and the existing data retained in the existing data retention section are compared with each other in accordance with the write control signal output from the control signal generating section (*see column 7, lines 34 – 38; see column 8, lines 13 – 17*).

In regard to claims 14 & 16, Searby teaches a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element (*element 13*), wherein: when the comparison section determines that the existing data and the new data are identical, the new data is not written to the storage element, and when the comparison section determines that the existing data and the new data are not identical, the new data is written to the storage element (*column 7, lines 34 – 38*); and a control signal generating section for generating a readout control signal for performing readout control of the existing data and a write control signal for performing write control of the new data (*the control signal generating section, while not shown, must exist in order for the circuit to know when to read control image data K and brush coefficient K_B*), wherein the existing data and the new data are compared with each other in the comparison section in accordance with the write control signal from the control signal generating section (*see column 8, lines 13 – 17*).

In regard to claim 15, Searby teaches reading out existing data stored in a storage element prior to writing new data to the storage element to compare the existing data and the new data to each other (*element 13*); writing the new data to the storage element when the existing data and said new data are identical with each other, and so as to perform the write process of said new data to said storage element in a case where said existing data and said new data are not identical with each other (*column 7, lines 34 – 38*); and generating a readout control signal and a write control signal in accordance with a write signal input to the data storage circuit (*the system has to know when to read and write out the existing data so*

therefore it is inherent); reading out the existing data in accordance with the readout control signal (*column 7, lines 34 – 38*); and comparing the existing data with the new data in accordance with the write control signal (*column 7, lines 34 – 38*).

Regarding claim 17, Searby teaches a new data retention section for temporarily retaining the new data (*element 14*); an existing data retention section for temporarily retaining the existing data (*element 3*); and a write enable signal generating section for comparing the new data retained in the new data retention section and the existing data retained in the existing data retention section with each other to control an output of the write enable signal (*column 8, lines 23 – 26*), wherein, the new data is temporarily retained in the new data retention section while the existing data is temporarily retained in the existing data retention section in response to the readout control signal output from the control signal generating section, and the new data retained in the new data retention section and the existing data retained in the existing data retention section are compared to each other in response to the write control signal output from the control signal generating section (*column 7, lines 34 – 38; column 8, lines 13 – 17*).

Regarding claim 18, Searby teaches wherein the readout control signal and said write control signal are produced from a write signal input to said control signal generating section (*element 7*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Searby* (US 5,412,402) as applied to claim 9 above, and further in view of *Kunikiyo* (US 2002/0145902).

For claim 17, from which claims 20 – 21 depend upon, see 102(b) rejections over *Searby* above.

For claim 20, *Searby* does not teach wherein said new data retention section and existing data retention section include input control transistors for controlling the retaining of the new data and the existing data in accordance with readout control signal. *Kunikiyo*, however, does (*see [0092]*). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this MRAM, as it would reduce the amount of time taken for batch erasing.

For claim 21, *Searby* does not teach wherein the write enable signal generation section includes output control transistors for controlling comparison of the new data and the existing data in accordance with the write control signal, but *Kunikiyo* does (*see [0092]*). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this MRAM, as it would reduce the amount of time taken for batch erasing.

Art Unit: 2188

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Searby* (US 5,412,402) in view of *Moyer* (US 6,052,302).

For claim 14, from which claim 22 depends upon, see 102(b) rejections over Searby above.

For claim 22, Searby does not teach wherein the write enable signal generation section includes an XOR logic gate for generating a write enable signal in accordance with the new data and the existing data. However, Moyer does (*see figure 7*). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this embodiment, as it would help minimize power consumption.

Conclusion

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2188

Examiner's Information

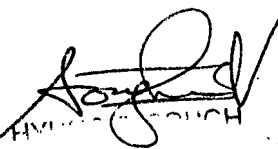
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn Eland whose telephone number is (571) 270-1029. The examiner can normally be reached on MO - TH, & every other FR.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-4199. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SE

Shawn Eland
10//2007


SUPERVISOR
10/29/07